



UNITED STATES DEPARTMENT OF COMMERCE
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| APPLICATION NUMBER | FILING DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO. |
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08/542,546 10/13/95 VUORINEN

T 30-336

EXAMINER

REVIEW

ART UNIT

PAPER NUMBER

1363
DATE MAILED:

09/10/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-21 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-21 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4, 6
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-~~10~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 511 695
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in view of ADMITTED PRIOR ART (page 4, lines 13-22 of the instant specification) with or without LACHENAL ET AL.

EP 511 695 teaches treating chemical cellulose pulp (see Example 1) produced by alkaline delignification (sulphate pulp) having a kappa number under 24 (kappa number 17) with an acid at a pH of 2.3 (Table I) at a temperature of 60° C for 30 minutes. This is the same hexenuronic acid removal step taught by Applicant. It would have been obvious to one of ordinary skill in the art that the sulphate pulp of EP 511 695 would contain hexenuronic acid as such is taught by the ADMITTED PRIOR ART. The sulphate (kraft) pulp of EP 511 695 would contain hexenuronic acid as it is contained in all sulphate pulps. The mere discovery of an additional, possibly heretofore unrecognized feature of a process, otherwise obvious over the prior art, does not alone render that process unobvious. In the instant case EP 511 695 teaches treating kraft pulp with the same acid treatment used by Applicant prior to a bleaching step. The discovery that the acid step removes hexenuronic acid, does not render the process unobvious as the acid step of EP 511 695 would react on the kraft pulp (which contains hexenuronic acid) in the same manner taught by Applicant, e.g. remove hexenuronic acid. See In re Best 195 USPQ 430. The claimed process

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steps do not differ from the process steps of EP 511 695, e.g. treating kraft pulp with an acid followed by bleaching. It would have been obvious to use a higher temperature to speed up the metal ion removal step of EP 511 695 as chemical reactions are known to be temperature rate effective. If this is not obvious then LACHENAL ET AL teaches that raising the temperature in the acid pretreatment results in a further decrease in kappa No. After the bleaching stage as kraft lignin becomes more susceptible to solubilization (See LACHENAL ET AL, page 147, second half of column 1, including Table 4). It would have been obvious to one of ordinary skill in the art to further reduce the kappa No. of EP 511 695 by increasing the temperature of the acid treatment as taught by LACHENAL ET AL. Claim 3 is rejected as the equation includes values within the time range of EP 511 695, e.g. temperature of 95°C and time of 120 minutes (see page 3, lines 55-59. See EP 511 695, page 3, lines 48-54 for treating hardwood kraft pulp with a kappa No. As low as 5. See page 3, lines 6-10 for P, Z, O, P_A, P-Z and (PO)-Z bleach sequences. Claims 20 and 21 are rejected as EP 511 695 teaches using further bleach stages to obtain brightness levels above 80 ISO (see Example 3).

Claims 14, 16 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "pc" is indefinite. It is not clear how this term is measured or what it represents. Is it a brightness measurement ? How does it differ from kappa No. or ISO ? Clarification is required.

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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:30 AM - 3:00 PM (EST)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Donald Czaja, can be reached on 703-308-3852. The **fax** phone number for this Art Unit is **(703)-305-7115**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **(703) 308-0651**.

MSA
September 5, 1996



STEVE ALVO
PRIMARY EXAMINER
ART UNIT 1303